

Date: Sat, 2 Apr 94 04:30:30 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V94 #79
To: Ham-Space

Ham-Space Digest Sat, 2 Apr 94 Volume 94 : Issue 79

Today's Topics:

 * SpaceNews 04-Apr-94 *
 Keplerian Elements
 orbs\$091.2l.amsat
 orbs\$091.micro.amsat
 orbs\$091.misc.amsat
 orbs\$091.oscar.amsat
 orbs\$091.weath.amsat

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 1 Apr 94 14:58:13 GMT
From: agate!howland.reston.ans.net!europa.eng.gtefsd.com!emory!
sol.ctr.columbia.edu!newsxfer.itd.umich.edu!nntp.cs.ubc.ca!alberta!ve6mgs!
usenet@ucbvax.berkeley.edu
Subject: * SpaceNews 04-Apr-94 *
To: ham-space@ucsd.edu

SB NEWS @ AMSAT \$SPC0404
* SpaceNews 04-Apr-94 *

BID: \$SPC0404

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SpaceNews

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MONDAY APRIL 4, 1994

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is published every week and is made available for unlimited distribution.

* LUNAR EXPLORATION CONFERENCE SCHEDULED *

=====

International Space Enterprises (ISE), a U.S. corporation planning a series of privately-financed missions to the Moon, has been selected to co-host an International Lunar Exploration Conference and Apollo commemorative event in San Diego. The conference is tentatively scheduled for 13-16 November 1994, which coincides with the 25th anniversary of America's second piloted mission to the Moon, Apollo 12. In addition to bringing together lunar scientists from all over the world, the event will kick off a nationwide educational initiative, whose ultimate goal is to fly a student experiment to the Moon by December 1997, the 25th anniversary of Apollo 17, the final Apollo mission to the Moon.

The November event will be co-sponsored by the National Space Society and the Spaceweek International Association, non-profit organizations dedicated to the expansion of human activities in space. The San Diego chapter of the National Space Society will work with ISE to develop the technical program for the conference, which will feature presentations and workshops on a variety of topics relating to exploration and utilization of the Moon. Spaceweek will manage the Apollo 12 commemorative event, planned as a gala fund-raising banquet on the evening of 15 November. Proceeds from the conference and banquet will be used for development and flight of the student experiment, which will be selected through a nationwide competition held during the 1995-96 academic year.

The specific site for the November conference will be selected within the next few weeks, and a preliminary conference program will be released in June. Details of the nationwide student experiment contest - which will be designed to involve students at all academic levels in the 1997 lunar mission - will be announced as they become available and a draft contest guidelines document will be presented at the November event. For additional information please contact Tom Kessler of ISE at (619) 637-5772.

[Info via Franklin Antonio]

* UFO ON 2-METERS *

=====

G3IOR reported an unidentified satellite sending telemetry on 145.592 MHz. It was first heard by G3JQI in England at 18:50 UTC "dopplering" down until a 18:55 UTC LOS on 16-Mar-94.

Keep an ear out for this spacecraft, and send reception reports to SpaceNews.

★ OSCAR-11 NEWS ★

=====

G3RWL reports that UoSAT-OSCAR-11 is about to re-commence its regular news bulletin transmissions. The news bulletins are transmitted in ASCII on a frequency of 145.826 MHz FM AFSK at 1200 bps.

★ SpaceNews AVAILABILITY ★

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SpaceNews archives are now available via anonymous FTP at pilot.njin.net! Files may be found under the /pub/SpaceNews directory. All issues from 1993 have been zipped together in one file, while 1994 issues are available separately in ASCII form. The IP address for pilot.njin.net is 128.6.7.38, and answers to frequently asked questions, satellite software, and space related GIF images will be added in the not-too-distant future.

The latest issue of SpaceNews has been available to those with Internet access for some time by using the Unix "finger" command as follows:

```
finger magliaco@pilot.njin.net
```

Those without "finger" capabilities can receive SpaceNews via e-mail by sending a blank message to jfesler@netcom.com with a subject of #finger magliaco@pilot.njin.net.

SpaceNews is also available on Usenet under the newsgroups of rec.radio.amateur.space and sci.space.news, thanks to the folks at the University of California at San Diego. It is also available on the Amateur Packet Radio Network, and several of the "Pacsat" satellites, thanks to Pacsat ground stations who upload the issues to the birds each week.

SpaceNews has also been known to appear on the packet radio personal message system operated by the Cosmonauts on the Russian space station Mir. :-)

★ SpaceNews BBS ★

=====

A "SpaceNews" packet radio BBS has been established by Mario, KD6ILO in Tacoma, Washington. Mario reports the BBS carries SpaceNews, AMSAT, and

NASA information, and serves the Puget Sound area on a frequency of 144.910 MHz. The BBS is also linked to the UoSAT-OSCAR-22 satellite through the N7RSN SatGate also located in Tacoma, WA.

* F0-20 SCHEDULE *

=====

The F0-20 command station announced that F0-20 will be placed in Mode JA (Analog transponder mode) during Field Day 1994 (25-Jun-94 18:00 UTC through 26-Jun-94 18:00 UTC).

The current operating schedule is as follows:

Analog mode:

06-Apr-94 06:45 -to- 13-Apr-94 07:10 UTC

20-Apr-94 07:35 -to- 27-Apr-94 07:55 UTC

11-May-94 06:54 -to- 18-May-94 07:20 UTC

Digital mode:

Unless otherwise noted above.

[Info via Kazu Sakamoto, JJ1WTK]

* THANKS! *

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Thanks to all those who sent messages of appreciation to SpaceNews, especially:

GM1SXX KA1CNK ON1EN KD6EFQ KD6ILO N8QPO

and First Lt. Walter Witt, N8DKI, of the USAF Auxillary Civil Air Patrol who uses SpaceNews in teaching aerospace science to cadets between the ages of 13 and 21.

* FEEDBACK/INPUT WELCOMED *

=====

Mail to SpaceNews should be directed to the editor (John, KD2BD) via any of the following paths:

FAX : 1-908-747-7107

PACKET : KD2BD @ N2KZH.NJ.USA.NA

INTERNET : kd2bd@ka2qhd.ocpt.ccur.com -or- kd2bd@amsat.org

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center

Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.

<<= SpaceNews: The first amateur newsletter read in space! -=>>

/EX

--

John A. Magliacane, KD2BD * /\ / * Voice : 1-908-224-2948
Advanced Technology Center |/\ /\ /\ | Packet : KD2BD @ N2KZH.NJ.USA.NA
Brookdale Community College |/\ /\ /\ | Internet: kd2bd@ka2qhd.ocpt.ccur.com
Lincroft, NJ 07738 * /\ / * Morse : -. -.. ..--- -... -..

Date: Thu, 31 Mar 1994 18:25:08 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!pipex!bnr.co.uk!corpgate!
news.utdallas.edu!feenix.metronet.com!pubcon!ray.hoad@network.ucsd.edu
Subject: Keplerian Elements
To: ham-space@ucsd.edu

I just uploaded a fresh set of keps for 04/01/94 in this conference.
The files are AMSATKEP.ZIP (AMSAT format) and NASAKEP.ZIP (NASA 2-line).
73 Ray.

Date: Thu, 31 Mar 1994 18:04:07 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!pipex!bnr.co.uk!corpgate!
news.utdallas.edu!feenix.metronet.com!pubcon!ray.hoad@network.ucsd.edu
Subject: orbs\$091.21.amsat
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-091.N
2Line Orbital Elements 091.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM WA5QGD FORT WORTH,TX April 1, 1994
BID: \$ORBS-091.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:

1 AAAAAU 00 0 0 BBBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

AO-10

1 14129U 83058B 94090.04857020 -.00000126 00000-0 10000-3 0 2727
2 14129 27.1828 334.6164 6021586 166.4731 222.3171 2.05878019 81175

UO-11

1 14781U 84021B 94088.54614116 .00000310 00000-0 60435-4 0 6772
2 14781 97.7907 106.9891 0011724 159.5745 200.5932 14.69179967538610

RS-10/11

1 18129U 87054A 94087.86953292 .00000048 00000-0 35789-4 0 8859
2 18129 82.9247 28.2040 0010048 247.5026 112.5060 13.72333957338899

AO-13

1 19216U 88051B 94089.57476926 -.00000405 00000-0 10000-4 0 8979
2 19216 57.8673 260.4952 7210521 338.0957 2.2906 2.09726187 44366

FO-20

1 20480U 90013C 94089.46791516 -.00000026 00000-0 82466-5 0 6724
2 20480 99.0274 256.2045 0541263 157.7469 204.8111 12.83224806194031

AO-21

1 21087U 91006A 94087.23338553 .00000093 00000-0 82657-4 0 4487
2 21087 82.9383 202.5987 0035057 312.0281 47.7812 13.74536472158468

RS-12/13

1 21089U 91007A 94087.91832396 .00000073 00000-0 62203-4 0 6754
2 21089 82.9180 70.9759 0029421 335.5442 24.4319 13.74038100157622

ARSENE

1 22654U 93031B 94089.09349977 -.00000105 00000-0 00000 0 0 2486
2 22654 1.5156 104.5135 2923641 175.5080 188.1427 1.42202601 77

UO-14

1 20437U 90005B 94089.78002368 .00000055 00000-0 38442-4 0 9775
2 20437 98.5902 175.6151 0011994 63.2614 296.9794 14.29833748218380

AO-16

1 20439U 90005D 94089.20880979 .00000052 00000-0 37099-4 0 7778
2 20439 98.6002 176.2024 0012329 65.1942 295.0533 14.29888159218318

DO-17

1 20440U 90005E 94089.24080620 .00000063 00000-0 41255-4 0 7769
2 20440 98.5996 176.5305 0012438 64.3153 295.9310 14.30027317218339

WO-18

1 20441U 90005F 94090.19431294 .00000051 00000-0 36697-4 0 7786
2 20441 98.6012 177.4806 0013046 61.5324 298.7177 14.30002526218473

LO-19

1 20442U 90005G 94089.26815097 .00000060 00000-0 40132-4 0 7767
2 20442 98.6013 176.8020 0013338 63.8292 296.4260 14.30097329218359

UO-22

1 21575U 91050B 94088.19621400 .00000082 00000-0 42436-4 0 4782
2 21575 98.4399 164.2896 0007602 162.2933 197.8526 14.36902851141598

KO-23

1 22077U 92052B 94089.40023487 -.00000037 00000-0 10000-3 0 3735
2 22077 66.0807 84.9415 0012132 306.9711 53.0198 12.86285590 76650

AO-27

1	22825U	93061C	94090.23004933	.000000064	000000-0	43978-4	0	2745
2	22825	98.6599	166.8062	0009628	75.4070	284.8171	14.27615820	26560
IO-26								
1	22826U	93061D	94090.21670618	.000000050	000000-0	37923-4	0	2741
2	22826	98.6600	166.8192	0010132	76.2498	283.9812	14.27718516	26561
KO-25								
1	22830U	93061H	94089.19391177	.000000061	000000-0	41952-4	0	2773
2	22830	98.5601	163.8935	0012606	49.5068	310.7222	14.28043381	26423
NOAA-9								
1	15427U	84123A	94081.96146229	.000000121	000000-0	88127-4	0	7596
2	15427	99.0648	131.4010	0015937	101.6666	258.6297	14.13600524478169	
NOAA-10								
1	16969U	86073A	94082.90887763	.000000064	000000-0	45657-4	0	6589
2	16969	98.5123	94.5094	0012333	216.3165	143.7179	14.24874536390466	
MET-2/17								
1	18820U	88005A	94089.18881615	.000000060	000000-0	40354-4	0	2751
2	18820	82.5443	331.4359	0018219	45.0857	315.1779	13.84712261311424	
MET-3/2								
1	19336U	88064A	94089.83574800	.000000051	000000-0	10000-3	0	2727
2	19336	82.5443	19.1260	0018339	97.2779	263.0433	13.16965918272948	
NOAA-11								
1	19531U	88089A	94083.23885812	.000000062	000000-0	58133-4	0	5722
2	19531	99.1670	70.0925	0012545	15.7107	344.4450	14.12969487283226	
MET-2/18								
1	19851U	89018A	94089.36906685	.000000056	000000-0	36961-4	0	2749
2	19851	82.5194	206.7454	0015814	87.7360	272.5605	13.84360092256784	
MET-3/3								
1	20305U	89086A	94090.37821933	.000000044	000000-0	10000-3	0	149
2	20305	82.5542	323.7875	0006847	112.9105	247.2662	13.04412938212758	
MET-2/19								
1	20670U	90057A	94088.50123196	.000000024	000000-0	79036-5	0	7761
2	20670	82.5419	271.7609	0017267	14.3017	345.8619	13.84189951189594	
FY-1/2								
1	20788U	90081A	94090.21888621	-.000000052	000000-0	-61897-5	0	9301
2	20788	98.8335	112.8405	0013476	222.0473	137.9657	14.01311217182780	
MET-2/20								
1	20826U	90086A	94089.84563327	.000000049	000000-0	31369-4	0	7851
2	20826	82.5242	208.2980	0011952	268.4342	91.5449	13.83575783176926	
MET-3/4								
1	21232U	91030A	94089.43280640	.000000051	000000-0	10000-3	0	6830
2	21232	82.5388	225.2547	0014229	26.7101	333.4745	13.16460745140997	
NOAA-12								
1	21263U	91032A	94074.00396538	.000000180	000000-0	10013-3	0	9646
2	21263	98.6278	103.8182	0013418	145.8585	214.3456	14.22379795147143	
MET-3/5								
1	21655U	91056A	94088.27818630	.000000051	000000-0	10000-3	0	6902
2	21655	82.5574	173.1754	0014560	41.6370	318.5859	13.16828652125949	
MET-2/21								

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1 22782U 93055A   94089.43710956 .000000034 00000-0 16948-4 0 2855
2 22782 82.5458 268.8400 0023835 84.7709 275.6182 13.83003171 29200
POSAT
1 22829U 93061G   94089.68812903 .000000066 00000-0 44108-4 0 2670
2 22829 98.6555 166.3095 0011064 65.4928 294.7409 14.28014942 26490
MIR
1 16609U 86017A   94090.25081547 .000008348 00000-0 11343-3 0 5497
2 16609 51.6462 216.9197 0015558 91.3363 268.9434 15.58441517493803
HUBBLE
1 20580U 90037B   94089.87951733 .00001063 00000-0 91113-4 0 4621
2 20580 28.4691 18.9736 0006088 352.0216 8.0277 14.90551165 17696
GRO
1 21225U 91027B   94087.37564364 .000004639 00000-0 10470-3 0 771
2 21225 28.4619 72.9760 0003357 25.2579 334.8185 15.40487736 44468
UARS
1 21701U 91063B   94088.55112080 -.000002513 00000-0 -19868-3 0 4983
2 21701 56.9828 118.1810 0004332 96.2144 263.9383 14.96463997139015
/EX

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Date: Thu, 31 Mar 1994 17:57:26 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!pipex!bnr.co.uk!corpgate!
news.utdallas.edu!feenix.metronet.com!pubcon!ray.hoad@network.ucsd.edu
Subject: orbs\$091.micro.amsat
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-091.D
Orbital Elements 091.MICROS

HR AMSAT ORBITAL ELEMENTS FOR THE MICROSATS
FROM WA5QGD FORT WORTH, TX April 1, 1994
BID: \$ORBS-091.D
TO ALL RADIO AMATEURS BT

Satellite: UO-14
Catalog number: 20437
Epoch time: 94089.78002368
Element set: 977
Inclination: 98.5902 deg
RA of node: 175.6151 deg
Eccentricity: 0.0011994
Arg of perigee: 63.2614 deg
Mean anomaly: 296.9794 deg
Mean motion: 14.29833748 rev/day
Decay rate: 5.5e-07 rev/day^2
Epoch rev: 21838
Checksum: 351

Satellite: A0-16
Catalog number: 20439
Epoch time: 94089.20880979
Element set: 777
Inclination: 98.6002 deg
RA of node: 176.2024 deg
Eccentricity: 0.0012329
Arg of perigee: 65.1942 deg
Mean anomaly: 295.0533 deg
Mean motion: 14.29888159 rev/day
Decay rate: 5.2e-07 rev/day²
Epoch rev: 21831
Checksum: 325

Satellite: D0-17
Catalog number: 20440
Epoch time: 94089.24080620
Element set: 776
Inclination: 98.5996 deg
RA of node: 176.5305 deg
Eccentricity: 0.0012438
Arg of perigee: 64.3153 deg
Mean anomaly: 295.9310 deg
Mean motion: 14.30027317 rev/day
Decay rate: 6.3e-07 rev/day²
Epoch rev: 21833
Checksum: 297

Satellite: W0-18
Catalog number: 20441
Epoch time: 94090.19431294
Element set: 778
Inclination: 98.6012 deg
RA of node: 177.4806 deg
Eccentricity: 0.0013046
Arg of perigee: 61.5324 deg
Mean anomaly: 298.7177 deg
Mean motion: 14.30002526 rev/day
Decay rate: 5.1e-07 rev/day²
Epoch rev: 21847
Checksum: 294

Satellite: L0-19
Catalog number: 20442
Epoch time: 94089.26815097
Element set: 776
Inclination: 98.6013 deg

RA of node: 176.8020 deg
Eccentricity: 0.0013338
Arg of perigee: 63.8292 deg
Mean anomaly: 296.4260 deg
Mean motion: 14.30097329 rev/day
Decay rate: 6.0e-07 rev/day^2
Epoch rev: 21835
Checksum: 312

Satellite: UO-22

Catalog number: 21575
Epoch time: 94088.19621400
Element set: 478
Inclination: 98.4399 deg
RA of node: 164.2896 deg
Eccentricity: 0.0007602
Arg of perigee: 162.2933 deg
Mean anomaly: 197.8526 deg
Mean motion: 14.36902851 rev/day
Decay rate: 8.2e-07 rev/day^2
Epoch rev: 14159
Checksum: 332

Satellite: KO-23

Catalog number: 22077
Epoch time: 94089.40023487
Element set: 373
Inclination: 66.0807 deg
RA of node: 84.9415 deg
Eccentricity: 0.0012132
Arg of perigee: 306.9711 deg
Mean anomaly: 53.0198 deg
Mean motion: 12.86285590 rev/day
Decay rate: -3.7e-07 rev/day^2
Epoch rev: 7665
Checksum: 306

Satellite: AO-27

Catalog number: 22825
Epoch time: 94090.23004933
Element set: 274
Inclination: 98.6599 deg
RA of node: 166.8062 deg
Eccentricity: 0.0009628
Arg of perigee: 75.4070 deg
Mean anomaly: 284.8171 deg
Mean motion: 14.27615820 rev/day
Decay rate: 6.4e-07 rev/day^2

Epoch rev: 2656
Checksum: 317

Satellite: IO-26
Catalog number: 22826
Epoch time: 94090.21670618
Element set: 274
Inclination: 98.6600 deg
RA of node: 166.8192 deg
Eccentricity: 0.0010132
Arg of perigee: 76.2498 deg
Mean anomaly: 283.9812 deg
Mean motion: 14.27718516 rev/day
Decay rate: 5.0e-07 rev/day^2
Epoch rev: 2656
Checksum: 309

Satellite: KO-25
Catalog number: 22830
Epoch time: 94089.19391177
Element set: 277
Inclination: 98.5601 deg
RA of node: 163.8935 deg
Eccentricity: 0.0012606
Arg of perigee: 49.5068 deg
Mean anomaly: 310.7222 deg
Mean motion: 14.28043381 rev/day
Decay rate: 6.1e-07 rev/day^2
Epoch rev: 2642
Checksum: 300

/EX

Date: Thu, 31 Mar 1994 18:02:21 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!pipex!bnr.co.uk!corpgate!
news.utdallas.edu!feenix.metronet.com!pubcon!ray.hoad@network.ucsd.edu
Subject: orbs\$091.misc.amsat
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-091.M
Orbital Elements 091.MISC

HR AMSAT ORBITAL ELEMENTS FOR MANNED AND MISCELLANEOUS SATELLITES
FROM WA5QGD FORT WORTH, TX April 1, 1994
BID: \$ORBS-091.M
TO ALL RADIO AMATEURS BT

Satellite: POSAT

Catalog number: 22829
Epoch time: 94089.68812903
Element set: 267
Inclination: 98.6555 deg
RA of node: 166.3095 deg
Eccentricity: 0.0011064
Arg of perigee: 65.4928 deg
Mean anomaly: 294.7409 deg
Mean motion: 14.28014942 rev/day
Decay rate: $6.6\text{e-}07$ rev/day²
Epoch rev: 2649
Checksum: 332

Satellite: MIR

Catalog number: 16609
Epoch time: 94090.25081547
Element set: 549
Inclination: 51.6462 deg
RA of node: 216.9197 deg
Eccentricity: 0.0015558
Arg of perigee: 91.3363 deg
Mean anomaly: 268.9434 deg
Mean motion: 15.58441517 rev/day
Decay rate: $8.348\text{e-}05$ rev/day²
Epoch rev: 49380
Checksum: 334

Satellite: HUBBLE

Catalog number: 20580
Epoch time: 94089.87951733
Element set: 462
Inclination: 28.4691 deg
RA of node: 18.9736 deg
Eccentricity: 0.0006088
Arg of perigee: 352.0216 deg
Mean anomaly: 8.0277 deg
Mean motion: 14.90551165 rev/day
Decay rate: $1.063\text{e-}05$ rev/day²
Epoch rev: 1769
Checksum: 307

Satellite: GRO

Catalog number: 21225
Epoch time: 94087.37564364
Element set: 77
Inclination: 28.4619 deg

RA of node: 72.9760 deg
Eccentricity: 0.0003357
Arg of perigee: 25.2579 deg
Mean anomaly: 334.8185 deg
Mean motion: 15.40487736 rev/day
Decay rate: 4.639e-05 rev/day^2
Epoch rev: 4446
Checksum: 326

Satellite: UARS
Catalog number: 21701
Epoch time: 94088.55112080
Element set: 498
Inclination: 56.9828 deg
RA of node: 118.1810 deg
Eccentricity: 0.0004332
Arg of perigee: 96.2144 deg
Mean anomaly: 263.9383 deg
Mean motion: 14.96463997 rev/day
Decay rate: -2.513e-05 rev/day^2
Epoch rev: 13901
Checksum: 305

/EX

Date: Thu, 31 Mar 1994 17:55:26 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!pipex!bnr.co.uk!corpgate!
news.utdallas.edu!feenix.metronet.com!pubcon!ray.hoad@network.ucsd.edu
Subject: orbs\$091.oscar.amsat
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-091.0
Orbital Elements 091.OSCAR

HR AMSAT ORBITAL ELEMENTS FOR OSCAR SATELLITES
FROM WA5QGD FORT WORTH,TX April 1, 1994
BID: \$ORBS-091.0
TO ALL RADIO AMATEURS BT

Satellite: A0-10
Catalog number: 14129
Epoch time: 94090.04857020
Element set: 272
Inclination: 27.1828 deg
RA of node: 334.6164 deg
Eccentricity: 0.6021586

Arg of perigee: 166.4731 deg
Mean anomaly: 222.3171 deg
Mean motion: 2.05878019 rev/day
Decay rate: -1.26e-06 rev/day²
Epoch rev: 8117
Checksum: 283

Satellite: UO-11

Catalog number: 14781
Epoch time: 94088.54614116
Element set: 677
Inclination: 97.7907 deg
RA of node: 106.9891 deg
Eccentricity: 0.0011724
Arg of perigee: 159.5745 deg
Mean anomaly: 200.5932 deg
Mean motion: 14.69179967 rev/day
Decay rate: 3.10e-06 rev/day²
Epoch rev: 53861
Checksum: 341

Satellite: RS-10/11

Catalog number: 18129
Epoch time: 94087.86953292
Element set: 885
Inclination: 82.9247 deg
RA of node: 28.2040 deg
Eccentricity: 0.0010048
Arg of perigee: 247.5026 deg
Mean anomaly: 112.5060 deg
Mean motion: 13.72333957 rev/day
Decay rate: 4.8e-07 rev/day²
Epoch rev: 33889
Checksum: 316

Satellite: A0-13

Catalog number: 19216
Epoch time: 94089.57476926
Element set: 897
Inclination: 57.8673 deg
RA of node: 260.4952 deg
Eccentricity: 0.7210521
Arg of perigee: 338.0957 deg
Mean anomaly: 2.2906 deg
Mean motion: 2.09726187 rev/day
Decay rate: -4.05e-06 rev/day²
Epoch rev: 4436
Checksum: 338

Satellite: F0-20
Catalog number: 20480
Epoch time: 94089.46791516
Element set: 672
Inclination: 99.0274 deg
RA of node: 256.2045 deg
Eccentricity: 0.0541263
Arg of perigee: 157.7469 deg
Mean anomaly: 204.8111 deg
Mean motion: 12.83224806 rev/day
Decay rate: $-2.6e-07$ rev/day²
Epoch rev: 19403
Checksum: 305

Satellite: A0-21
Catalog number: 21087
Epoch time: 94087.23338553
Element set: 448
Inclination: 82.9383 deg
RA of node: 202.5987 deg
Eccentricity: 0.0035057
Arg of perigee: 312.0281 deg
Mean anomaly: 47.7812 deg
Mean motion: 13.74536472 rev/day
Decay rate: $9.3e-07$ rev/day²
Epoch rev: 15846
Checksum: 318

Satellite: RS-12/13
Catalog number: 21089
Epoch time: 94087.91832396
Element set: 675
Inclination: 82.9180 deg
RA of node: 70.9759 deg
Eccentricity: 0.0029421
Arg of perigee: 335.5442 deg
Mean anomaly: 24.4319 deg
Mean motion: 13.74038100 rev/day
Decay rate: $7.3e-07$ rev/day²
Epoch rev: 15762
Checksum: 315

Satellite: ARSENE
Catalog number: 22654
Epoch time: 94089.09349977
Element set: 248
Inclination: 1.5156 deg

RA of node: 104.5135 deg
Eccentricity: 0.2923641
Arg of perigee: 175.5080 deg
Mean anomaly: 188.1427 deg
Mean motion: 1.42202601 rev/day
Decay rate: -1.05e-06 rev/day^2
Epoch rev: 7
Checksum: 273

/EX

Date: Thu, 31 Mar 1994 18:00:42 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!pipex!bnr.co.uk!corpgate!
news.utdallas.edu!feenix.metronet.com!pubcon!ray.hoad@network.ucsd.edu
Subject: orbs\$091.weath.amsat
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-091.W
Orbital Elements 091.WEATHER

HR AMSAT ORBITAL ELEMENTS FOR WEATHER SATELLITES
FROM WA5QGD FORT WORTH,TX April 1, 1994
BID: \$ORBS-091.W
TO ALL RADIO AMATEURS BT

Satellite: NOAA-9
Catalog number: 15427
Epoch time: 94081.96146229
Element set: 759
Inclination: 99.0648 deg
RA of node: 131.4010 deg
Eccentricity: 0.0015937
Arg of perigee: 101.6666 deg
Mean anomaly: 258.6297 deg
Mean motion: 14.13600524 rev/day
Decay rate: 1.21e-06 rev/day^2
Epoch rev: 47816
Checksum: 312

Satellite: NOAA-10
Catalog number: 16969
Epoch time: 94082.90887763
Element set: 658
Inclination: 98.5123 deg
RA of node: 94.5094 deg
Eccentricity: 0.0012333

Arg of perigee: 216.3165 deg
Mean anomaly: 143.7179 deg
Mean motion: 14.24874536 rev/day
Decay rate: 6.4e-07 rev/day^2
Epoch rev: 39046
Checksum: 336

Satellite: MET-2/17
Catalog number: 18820
Epoch time: 94089.18881615
Element set: 275
Inclination: 82.5443 deg
RA of node: 331.4359 deg
Eccentricity: 0.0018219
Arg of perigee: 45.0857 deg
Mean anomaly: 315.1779 deg
Mean motion: 13.84712261 rev/day
Decay rate: 6.0e-07 rev/day^2
Epoch rev: 31142
Checksum: 311

Satellite: MET-3/2
Catalog number: 19336
Epoch time: 94089.83574800
Element set: 272
Inclination: 82.5443 deg
RA of node: 19.1260 deg
Eccentricity: 0.0018339
Arg of perigee: 97.2779 deg
Mean anomaly: 263.0433 deg
Mean motion: 13.16965918 rev/day
Decay rate: 5.1e-07 rev/day^2
Epoch rev: 27294
Checksum: 324

Satellite: NOAA-11
Catalog number: 19531
Epoch time: 94083.23885812
Element set: 572
Inclination: 99.1670 deg
RA of node: 70.0925 deg
Eccentricity: 0.0012545
Arg of perigee: 15.7107 deg
Mean anomaly: 344.4450 deg
Mean motion: 14.12969487 rev/day
Decay rate: 6.2e-07 rev/day^2
Epoch rev: 28322
Checksum: 300

Satellite: MET-2/18
Catalog number: 19851
Epoch time: 94089.36906685
Element set: 274
Inclination: 82.5194 deg
RA of node: 206.7454 deg
Eccentricity: 0.0015814
Arg of perigee: 87.7360 deg
Mean anomaly: 272.5605 deg
Mean motion: 13.84360092 rev/day
Decay rate: 5.6e-07 rev/day^2
Epoch rev: 25678
Checksum: 341

Satellite: MET-3/3
Catalog number: 20305
Epoch time: 94090.37821933
Element set: 14
Inclination: 82.5542 deg
RA of node: 323.7875 deg
Eccentricity: 0.0006847
Arg of perigee: 112.9105 deg
Mean anomaly: 247.2662 deg
Mean motion: 13.04412938 rev/day
Decay rate: 4.4e-07 rev/day^2
Epoch rev: 21275
Checksum: 284

Satellite: MET-2/19
Catalog number: 20670
Epoch time: 94088.50123196
Element set: 776
Inclination: 82.5419 deg
RA of node: 271.7609 deg
Eccentricity: 0.0017267
Arg of perigee: 14.3017 deg
Mean anomaly: 345.8619 deg
Mean motion: 13.84189951 rev/day
Decay rate: 2.4e-07 rev/day^2
Epoch rev: 18959
Checksum: 337

Satellite: FY-1/2
Catalog number: 20788
Epoch time: 94090.21888621
Element set: 930
Inclination: 98.8335 deg

RA of node: 112.8405 deg
Eccentricity: 0.0013476
Arg of perigee: 222.0473 deg
Mean anomaly: 137.9657 deg
Mean motion: 14.01311217 rev/day
Decay rate: -5.2e-07 rev/day^2
Epoch rev: 18278
Checksum: 300

Satellite: MET-2/20
Catalog number: 20826
Epoch time: 94089.84563327
Element set: 785
Inclination: 82.5242 deg
RA of node: 208.2980 deg
Eccentricity: 0.0011952
Arg of perigee: 268.4342 deg
Mean anomaly: 91.5449 deg
Mean motion: 13.83575783 rev/day
Decay rate: 4.9e-07 rev/day^2
Epoch rev: 17692
Checksum: 340

Satellite: MET-3/4
Catalog number: 21232

End of Ham-Space Digest V94 #79
